



قائمة الاسئلة

الذكاء الاصطناعي - () - المستوى الرابع - قسم معلم الحاسوب - كلية الحاسوب - جامعة صنعاء - الفترة - درجة الامتحان (50)

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- 1) The process of forming general concept definitions from examples of concepts to be learned.
  - 1) - deduction
  - 2) - abduction
  - 3)  + induction
  - 4) - conjunction
- 2) What is the primary goal of a search algorithm in AI?
  - 1) - To store data efficiently
  - 2)  + To find a solution or path in a problem space
  - 3) - To classify data
  - 4) - To optimize memory usage
- 3) What is the main objective of game-playing AI?
  - 1) - To entertain users
  - 2)  + To find the optimal strategy for playing a game
  - 3) - To analyze game data
  - 4) - To simulate real-world scenarios
- 4) Which of the following is not heuristic search algorithms
  - 1) - Best-first search
  - 2) - A\*
  - 3)  + depth first search
  - 4) - Hill Climbing
- 5) Which algorithm is commonly used for decision-making in two-player games?
  - 1) - A\* Algorithm
  - 2)  + Minimax strategy
  - 3) - Breadth-First Search
  - 4) - Hill Climbing
- 6) Which of the following is a component of Artificial Intelligence?
  - 1)  + Learning
  - 2) - Training
  - 3) - Designing
  - 4) - None of the above
- 7) The total number of predicate logic elements in AI are \_\_\_\_\_
  - 1) - 2 elements
  - 2)  + 3 elements
  - 3) - 4 elements
  - 4) - None of the above
- 8) Which of the following is a common approach to create AI for complex games?
  - 1) - Rule-based systems
  - 2) - Genetic algorithms
  - 3) - Neural networks
  - 4)  + All of the above
- 9) \_\_\_\_\_ are designed to solve complex problems by reasoning through bodies of knowledge.
  - 1) - Computer systems
  - 2)  + Expert systems
  - 3) - Operating systems
  - 4) - Transaction processing systems





- 10) The \_\_\_ represents facts and rules
- 1)  Knowledge base
  - 2)  Inference engine
  - 3)  Operating system
  - 4)  None of these
- 11) The \_\_\_ applies the rules to the known facts to deduce new facts
- 1)  Operating system
  - 2)  Knowledge base
  - 3)  Inference engine
  - 4)  None of these
- 12) The expert system uses a(n) ..... to select the most appropriate response|:
- 1)  inference
  - 2)  decision support system
  - 3)  knowledge base
  - 4)  data source
- 13) You are given the following Production Rules:
- 1- IF A3 then C3
  - 2- IF A2 and C3 then A3
  - 3- IF C4 then C5
- Assume that C3 is True; by using BACKWAED chaining the following are inferred in the second cycle:
- 1)  A3,C3
  - 2)  C3, A2
  - 3)  C3, C2
  - 4)  none of the above
- 14) You are given the following Production Rules:
- 1- IF A1 and A2 then C1
  - 2- IF A3 and C3 then C2
  - 3- IF A3 then C3
  - 4- IF A2 and C3 then C4
- Assume that A3 is True, by using forward chaining the following are inferred in the second cycle:
- 1)  C3
  - 2)  C3, A2
  - 3)  C3, C2
  - 4)  none of the above
- 15) What is propositional logic?
- 1)  A logic system dealing with statements that can be true or false
  - 2)  A logic system used for natural language processing
  - 3)  A form of logic based on quantifiers
  - 4)  A logic system that uses variables and functions
- 16) What is a knowledge base in AI?
- 1)  A collection of data
  - 2)  A set of facts and rules used for reasoning
  - 3)  A database of user inputs
  - 4)  A system for storing algorithms
- 17) In predicate logic, the expression " $\forall x (P(x) \rightarrow Q(x))$ " means "for every x, if P of x is true, then Q of x is also true."\*\*
- 1)  1
  - 2)  0
- 18) What is the result of the equivalence (  $P \rightarrow Q$  ) and (  $\sim Q \rightarrow \sim P$  )?





- 1) - They are not equivalent
  - 2)  They are logically equivalent
  - 3) - They are always false
  - 4) - They contradict each other
- 19) In logic, the statement "A and B" is true if either A or B is true
- 1) - 1
  - 2)  0
- 20) Predicate logic can express more complex statements than propositional logic.\*\*
- 1)  1
  - 2) - 0

